

REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-16 are presently active in this case. The present Amendment amends Claims 1, 4-7, 11 and 12.

The outstanding Office Action objected to Claim 7 because of informalities. Claims 1, 2, 4, 5, 7, and 10-16 were rejected under 35 U.S.C. § 102(b) as being anticipated by Ardell (U.S. Patent No. 3,139,786). Claims 3 and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ardell. Claims 6 and 8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ardell in view of King, Jr. (U.S. Patent No. 3,371,572).

In order to clarify Applicants' invention, independent Claim 1 is amended to recite a step of forming a seal and an adhesive bond between the locking collar and the bolt shaft with the surface sealant layer. These features find non-limiting support in the disclosure as originally filed, for example, at page 4, lines 9-14. Therefore, the changes to Claim 1 are not believed to raise a question of new matter.¹

In response to the objection to dependent Claim 7, Claim 7 is amended to correct the noted informality. Claims 5 and 11 are also amended to correct minor informalities.

In response to the rejections of independent Claim 1 and dependent Claims 2-16 under 35 U.S.C. § 102(b) and 103(a) and in light of the amendment to Claim 1, Applicants respectfully request reconsideration of these rejections and traverse the rejections as discussed next.

Briefly recapitulating, Applicants' invention relates to a method of securing at least two workpieces, including the steps of inserting a bolt shaft through a bore hole formed in each of the two workpieces, applying a sealant to the two workpieces, and engaging a locking

¹ See MPEP 2163.06 stating that "information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter."

collar with the bolt shaft such that the locking collar is securely deformed in a locking manner. The sealant distributes and forms a surface sealant layer on the bolt shaft. The method includes a step of forming *a seal and an adhesive bond* between the locking collar and the bolt shaft with the surface sealant layer. As explained in Applicants' specification at page 4, line 25 – page 5, line 9 with corresponding Fig. 3, Applicants' invention improves upon conventional methods because it allows not only to squeeze-out excess sealant but also to keep sealant to form *a seal and an adhesive bond* between the locking collar and the locking portion of the bolt shaft. The claimed invention thus leads to an improved method for securing two workpieces.

Turning now to the applied prior art, the Ardell patent discloses a fastening device having a shank with integral head at one end and the head at the other end formed by a malleable collar swaged to the shank.² The fastening device further includes a plurality of annular grooves and a relief groove which is located axially along the outer surface of the shank connecting all the annular grooves. This relief groove provides passage for a sealant located between the malleable collar and the shank so as to relieve the hydrostatic pressure and allow a better formation of beads on the inner surface of collar.³ However, the Ardell patent fails to teach a method of engaging a locking collar with the bolt shaft such that sealant is forced to *distribute and form a surface sealant layer* on the bolt shaft and the step of *forming a seal and an adhesive bond* between the locking collar and the bolt shaft with the surface sealant layer. On the contrary, the Ardell patent explicitly teaches a fastening device with a relief groove, which function is to squeeze-out the sealant. Even if the Ardell patent states that “some sealant will still be retained between the inner surface of the collar and the outer surface of the shank” there is no mention that this sealant would be forced to distribute

² See Ardell, column 1, lines 8-12.

³ See Ardell, column 2, lines 18-20 and 42-47.

and form a *surface sealant layer* on the shank. In addition the Ardell patent does not teach or suggest a step of *forming a seal and an adhesive bond*. Only certain sealants are able to form an adhesive bond at all (i.e. sealants that cure or harden rather than remaining viscous or paste), and only some of those sealants are able to adhesively bond onto the metal material of the locking collar and the lockbolt. Therefore, the Ardell patent does not inherently teach the claimed step of forming a seal and an adhesive bond because it fails to show "that the alleged inherent characteristic necessarily flows from the teachings of the applied prior art."⁴ Furthermore, the King, Jr. patent does not remedy the above shortcomings of the Ardell patent. Therefore, the prior art fails to teach or suggest, explicitly or inherently, every feature recited in Applicants' claims, so that Claims 1-16 are patentably distinct over the prior art. Accordingly, Applicants respectfully traverse, and request reconsideration of the rejections based on the Ardell patent.⁵

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-16 is earnestly solicited.

⁴ See MPEP 2112 (emphasis in original) (citation omitted). See also same section stating that "[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic," (emphasis in original). See also In re Robertson, 49 USPQ2d 1949, 1951 (Fed. Cir. 1999) ("[t]o establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill,'" citing Continental Can Co. v. Monsanto Co., 948 F2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991); and "[i]nherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient," Id. at 1269 (citation omitted)).

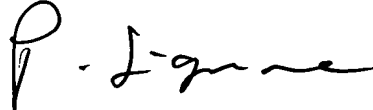
⁵ See MPEP 2131: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," (Citations omitted) (emphasis added). See also MPEP 2143.03: "All words in a claim must be considered in judging the patentability of that claim against the prior art."

Application No. 10/690,633
Reply to Office Action of May 3, 2004

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Attorney of Record
Registration No. 25,599
Philippe J. C. Signore, Ph.D.
Registration No. 43,922



22850

Tel. (703) 413-3000
Fax (703) 413-2220
GJM/PJCS/pm/vss
I:\ATTY\PJCS\249141.PJCS.AIRBUS\244375US LOCKBOLT DIV DAVE\244375.AM.DOC